DEPARTMENT OF SAFETY AND INSPECTIONS
Bob Kessler, Director

CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

375 Jackson Street, Suite 220
St Paul, Minnesota 55101-1806

Telephone: 651-266-9090
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

AFCI Protection of Residential Circuits In Existing Dwellings

"210.12 Arc-Fault Circuit-Interrupter Protection.
(A) Definition: Arc-Fault Circuit Interrupter (AFCI). A device intended to provide protection from the effects of arc faults by recognizing characteristics unique to arcing and by functioning to de-energize the circuit when an arc fault is detected.
(B) Dwelling Units. All 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter, combination-type, installed to provide protection of the branch circuit.
FPN No. 1: For information on types of arc-fault circuit interrupters, see UL 1699-1999, Standard for Arc-Fault Circuit Interrupters.
FPN No. 2: See 11.6.3(5) of NFPA 72®-2007, National Fire Alarm Code®, for information related to secondary power supply requirements for smoke alarms installed in dwelling units.
FPN No. 3: See 760.41(B) and 760.121(B) for power-supply requirements for fire alarm systems.
Exception No. 1: Where RMC, IMC, EMT or steel armored cable, Type AC, meeting the requirements of 250.118 using metal outlet and junction boxes is installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install a combination AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.
Exception No. 2: Where a branch circuit to a fire alarm system installed in accordance with 760.41(B) and 760.121(B) is installed in RMC, IMC, EMT, or steel armored cable, Type AC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted."

This Section of the 2008 National Electrical Code requires Arc-Fault Circuit Interrupter (AFCI) protection of <u>all</u> 125-volt, 15 & 20 ampere outlets in most areas of a dwelling unit. These "outlets" include, but are not limited to, light fixtures, smoke detectors, receptacles, etc.

St. Paul will enforce this as follows:

1. All new dwellings or dwelling units will be required to have AFCI protection for all circuits as required in 210.12.
2. New areas of a dwelling (such as additions) in existing dwellings will also need AFCI protection for all outlets if required by 210.12.
3. New outlets installed in existing dwelling units will require AFCI protection if covered by 210.12. Existing outlets may remain as is or may optionally be AFCI protected.
4. **If the only electrical work done in a dwelling is adding a hard-wired smoke detector for sale of the dwelling, since this requirement is a local ordinance and not a requirement of the NEC, we will not require that the new smoke detector be protected by an AFCI breaker.** If <u>any</u> other work besides the smoke detector is performed, then we will require any new smoke detector to be on an AFCI-protected circuit, plus all other new work that would be covered by this section.

At present, the only means of AFCI protection is by using an AFCI circuit-breaker. These

AFCI breakers must be of the “combination” type which is indicated on the breaker itself. AFCI circuit-breakers have been available from 4 different manufacturers for over 5-1/2 years, so no excuses of product availability will be considered. In the case of fuse panels in existing dwellings, this may require a circuit-breaker sub-panel in order to conform to this Section.

Note: Please see Section 210.12 and other pertinent sections of the 2008 National Electrical Code for further information on this and other requirements. We do not have copies available, check with your local library or electrical supply house.

This will be enforced on all electrical permits obtained after September 15, 2008 which is the effective date of the 2008 NEC.